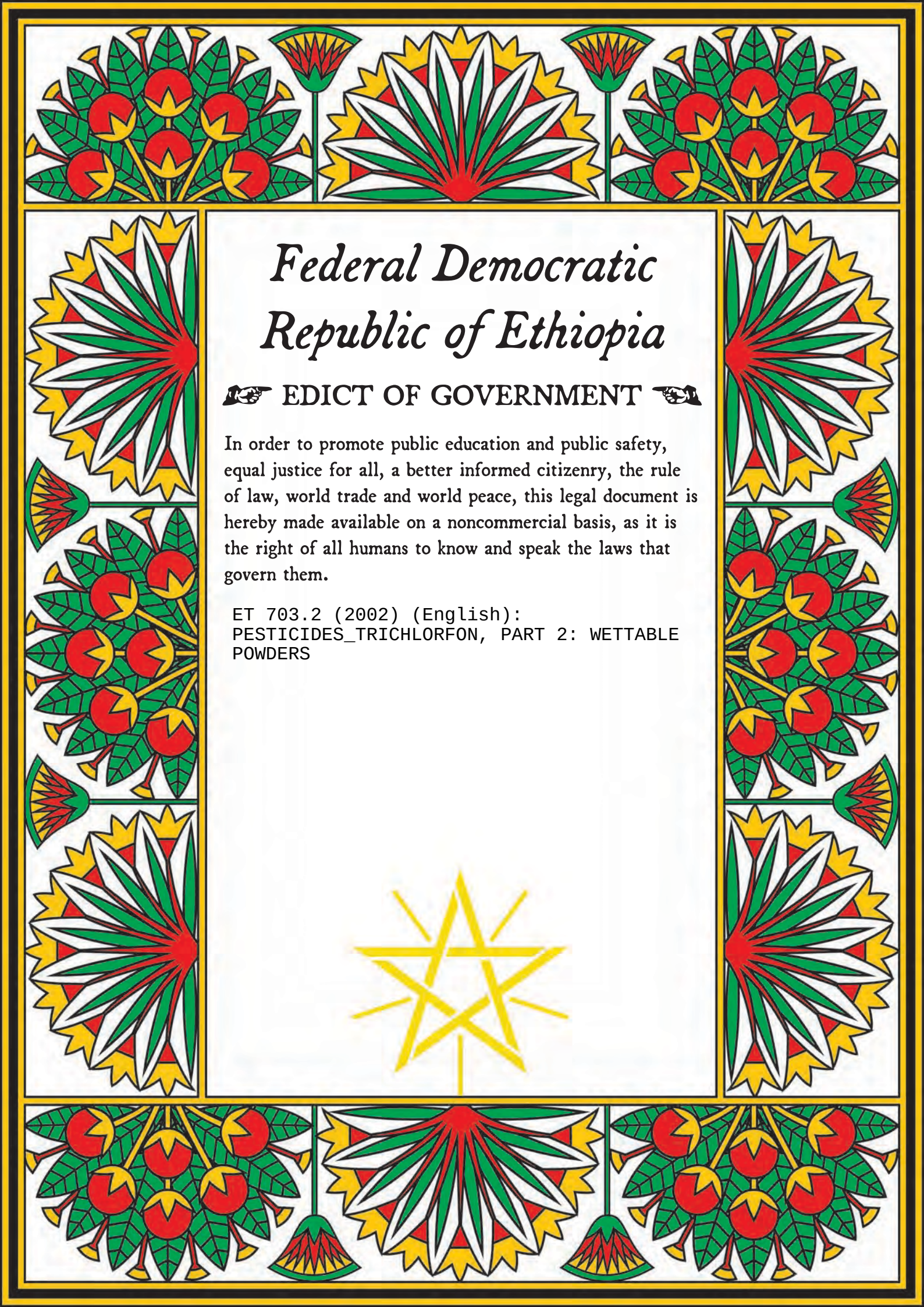




Federal Democratic Republic of Ethiopia

👉 EDICT OF GOVERNMENT 👈

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ET 703.2 (2002) (English):
PESTICIDES_TRICHLORFON, PART 2: WETTABLE
POWDERS



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**Pesticides — Trichlorfon
Part 2:
Wettable powders (WP) —
Specification**

ICS: 65.100.01

Published by Ethiopian Standards Agency

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Foreword

This Ethiopian Standard has been prepared under the direction of the Technical Committee for Pesticides (TC 19) and published by the Ethiopian Standards Agency (ESA).

The standard is a reaffirmation for reprint of the Ethiopian Standard ES 703-2:2002, Pesticide- Trichlorophon Part 2: Wettable Powders (WP) Specification, with some editorial changes without altering the technical contents in the former text.

Pesticides — Trichlorfon

Part 2: Wettable powders(WP) — Specification

1 Scope

This Ethiopian Standard specifies requirements for wettable powders of trichlorfon (for plant protection purpose).

2 Normative references

The following Ethiopian Standards contain provisions which, through reference in this text, constitute the provisions of this Ethiopian Standard. At the time of publication the editions indicated were valid. All standards are subject to revision and parties to agreements based on this Ethiopian Standard are encouraged to investigate the possibility of applying the most recent editions of the Ethiopian Standards indicated below. Registers of currently valid standards are maintained in the Ethiopian Standards Agency.

ES 693, *Pesticides – Terminology.*

ES 694, *Pesticides – Methods of sampling.*

ES 695, *Pesticides – Packaging.*

ES 696, *Pesticides – Guideline on good labelling practice.*

ES 697, *Pesticides – Guideline for retail distribution, storage and handling.*

ES 700, *Pesticides – Guideline on the disposal of bulk quantities of obsolete pesticides.*

ES 703-1, *Pesticides – Trichlorfon – Part 1: Technical material(TC) – Specification.*

ES 733, *Pesticides – Determination of trichlorfon content.*

ES 734, *Pesticides – Determination of water insoluble material.*

ES 747, *Pesticides – Determination suspensibility of dust able powders.*

ES 749, *Pesticides – Determination of water content.*

ES 750, *Pesticides – Determination of free acidity or alkalinity content.*

ES 753, *Pesticides – Determination of accelerated storage stability.*

ES 754, *Pesticides – Determination of persistent foaming.*

ES 755, *pesticides – Determination of wettable powders.*

ES 756, *Pesticides – Sieve analysis.*

WD ¹⁾: *Pesticides – Determination of trichlorfon identity.*

¹⁾ Under preparation

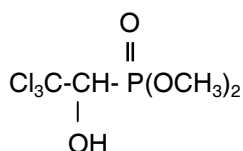
3 Definitions

For the purpose of this Ethiopian Standard, terms defined in ES 693 shall apply.

4 General information

COMMON NAME: Trichlorfon (ISO)

STRUCTURAL FORMULA:



EMPIRICAL FORMULA: $\text{C}_4\text{H}_8\text{Cl}_3\text{O}_4\text{P}$

RMM: 257.4

CAS REGISTRY NUMBER: 52-68-6

CIPAC CODE NUMBER: 68

CHEMICAL NAME:

dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate (IUPAC)

dimethyl (2,2,2-trichloro-1-hydroxyethyl) phosphonate (CA)

CHEMICAL GROUP: Organochlorine

USE CATEGORY: Insecticide

WHO CLASS²⁾:

5 Requirements

5.1 Description

The material shall consist of a homogeneous mixture of technical trichlorfon complying with the requirements of

ES 703-2 together with any necessary formulants. It shall be in the form of a fine powder free from visible extraneous matter and hard lumps.

NOTE 1: If required, the material shall contain a dye in agreement with pertinent national legislation.

5.2 Active ingredient

5.2.1 Identity tests

Where the identity of the active ingredient is in doubt, it shall be determined in accordance with WD¹⁾, and the isolated active ingredient shall comply with at least one additional test.

²⁾ Based on the technical material

5.2.2 Trichlorfon

The trichlorfon content shall be declared (g/kg) and when determined, in accordance with ES 733, the content obtained shall not differ from that declared by more than the following amounts:

<u>Declared Content</u>	<u>Permitted Tolerance</u>
up to 500 g/kg	-5 to + 10% of the declared content
above 500 g/kg	-25 to + 50 g

5.3 Impurities

5.3.1 Water

When determined in accordance with clause 4.1 of ES 749, the maximum water content shall be 10g/kg.

5.3.2 Water insolubles

The content of solid matter insoluble in water shall be declared in g/kg and when determined in accordance with clause 7.2 of ES 734 the content obtained shall not differ from that declared by more than ± 25 g/kg.

5.4 Physical properties

5.4.1 Acidity or alkalinity

When determined in accordance with clause 6.1 of ES 750, the maximum acidity, if any, calculated as H_2SO_4 ; or alkalinity if any, calculated as NaOH shall be 5 g/kg and 2 g/kg respectively.

5.4.2 Persistent foam (Note 4)

When determined in accordance with clause 5.1 of ES 754, the maximum volume of the persistent foam after 1 min shall be 25 ml.

5.4.3 Wet sieve test

When determined in accordance with clause 5.2 of ES 756, the maximum amount retained on a 75 μm test sieve shall be 2.0%.

5.4.4 Suspensibility (Note 2 and 3)

When determined in accordance with ES 747, a minimum of 50% of the solid material declared under clause 5.3.2 shall be in suspension after 30 min in standard water C.

NOTE 2: Use standard water c for diluting the material and stir the mixture for 10 minutes.

NOTE 3: Limits are given for products which do not contain acidic stabilizers. For other products maximum acidity shall be declared.

NOTE 4: The amount of sample to be used in the test should be specified.

5.5 Storage stability

5.5.1 Stability at 54°C

When determined in accordance with clause 6.1.1 of ES 753, (after storage at 54 $\pm$ 2°C for 14 days), the product shall continue to comply with clause 5.2.2 (except that the minimum permitted trichlorfon content shall be 95% of that found under clause 5.2.2 and 5.4.1 (an increase in acidity to a maximum of 8 g/kg is acceptable; Note 3) and clause 5.4.4.

5.5 Wetting of the product

When determined in accordance with clause 8.1 of ES 755, it shall be completely wetted in 2 min. without swirling.

6 Handling

Pesticides shall be handled in accordance with ES 697.

7 Sampling

Samples shall be taken in accordance with ES 694.

8 Packaging

Pesticides shall be packed in accordance with ES 695.

9 Labelling

Pesticides labelling shall be in accordance with ES 696.

10 Disposal

Disposal of bulk quantities of obsolete pesticides shall be in accordance with ES 700.

11 Marking

Packages manufactured with the requirements of this Ethiopian Standard shall bear the Quality Mark upon approval by the responsible authority.



Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010. ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1970.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational institutions, research institutes, government organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes.

Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed in from our website.

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ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the international Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM). It is a founding member of the African Regional Organization for standardization (ARSO).

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